



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,687	11/19/2003	Charles Jeff Morgan	200588-20700	6600
32847	7590	09/25/2009		
Winston & Strawn LLP Patent Department 1700 K Street, N.W. Washington, DC 20006			EXAMINER CHARLES, MARCUS	
			ART UNIT 3656	PAPER NUMBER
			MAIL DATE 09/25/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

*Ex parte* CHARLES JEFF MORGAN

---

Appeal 2009-003443  
Application 10/716,687  
Technology Center 3600

---

Decided: September 25, 2009

---

Before JENNIFER D. BAHR, JOHN C. KERINS, and  
KEN B. BARRETT, *Administrative Patent Judges*.

BARRETT, *Administrative Patent Judge*.

DECISION ON APPEAL

## STATEMENT OF THE CASE

Charles Jeff Morgan (Appellant) seeks our review under 35 U.S.C. § 134 of the Examiner's decision rejecting claims 1-3, 6-9, 12-16, 19, and 20. We have jurisdiction under 35 U.S.C. § 6(b).

## SUMMARY OF THE DECISION

We AFFIRM-IN-PART.

## THE INVENTION

Appellant's claimed invention pertains to a power shaft in a belt-drive system, such as the output shaft in a vacuum cleaner, with a belt retaining geometry. Spec. 1, ll. 4-13. Claim 1, reproduced below, is representative of the subject matter on appeal.

1. A power shaft 100 including a belt retaining geometry, with the power shaft having a shaft including a normal belt position portion 110 adapted for receiving a belt 201, the power shaft characterized in that the shaft comprises:
  - a reduced diameter portion 114 formed on the shaft and located adjacent to the normal belt position portion;
  - wherein the belt can move into the reduced diameter portion of the power shaft during operation and the reduced diameter portion creates an alignment tension force on the belt that operates to return the belt to the normal belt position portion.

## THE REJECTION

Before us for review is the Examiner's rejection of claims 1-3, 6-9, 12-16, 19, and 20 under 35 U.S.C. § 102(b) as being anticipated by Lawroski (US 5,318,479, issued June 7, 1994).

## ISSUES

Appellant argues that Lawroski does not disclose a power shaft including a belt retaining geometry, but rather discloses a pulley with a belt groove. App. Br. 5. Appellant also argues that Lawroski does not disclose a power shaft having a normal belt position with a reduced diameter portion adjacent thereto. App. Br. 5-6; Reply Br. 2. Thus, the first issue on appeal is:

Has Appellant shown that the Examiner erred in finding the rejected claims anticipated because Lawroski fails to disclose the recited power shaft?

As to claim 8, Appellant argues that Lawroski does not disclose a first angled portion, a second angled portion, and a neck region formed between those angled portions. App. Br. 6; Reply Br. 1-2. Appellant also argues that Lawroski's belt rides in the groove (the reduced diameter portion) and not on the claimed normal belt position portion. App. Br. 5-6, Reply Br. 2-3. Thus, the second issue on appeal is:

Has Appellant shown that the Examiner erred in rejecting claim 8 because Lawroski does not disclose the recited angled portions with a neck region or a belt on the claimed normal belt position portion?

## FINDINGS OF FACT

We find that the following enumerated findings are supported by at least a preponderance of the evidence.

1. Appellant's Figure 5 is reproduced below:

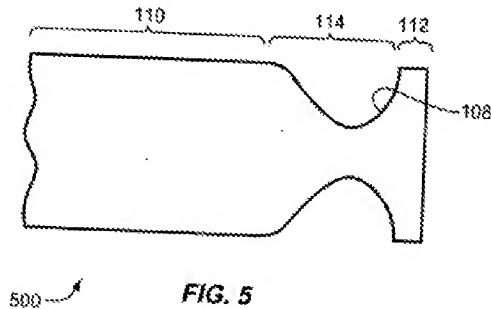


Figure 5 depicts an embodiment of Appellant's power shaft. Spec. 3, l. 10. Appellant's Specification states that, "[i]n this embodiment [shown in Figure 5], the second angled portion 108 comprises a curved portion having a substantially constant or varying curvature radius." Spec. 6, ll. 28-29.

2. Appellant's Specification also states that "[t]he neck region 106 can comprise a neck radius that transitions substantially smoothly between the first angled portion 107 and the second angled portion 108." Spec. 4, ll. 29-31.

3. Figure 1A of Lawroski is reproduced below:

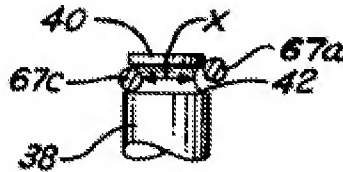


Figure 1A depicts an "installation tool positioned in a groove of a drive shaft of a vacuum cleaner." Lawroski, col. 2, ll. 1-3.

4. Lawroski discloses drive shaft 38 with a pulley 40 thereon having belt groove 42, and discloses that a belt 50 (not shown in Figure 1A)

is received in the groove 42 of the pulley. Lawroski, col. 2, ll. 31-33, 42-44. The pulley and its belt groove appear, in Figure 1A, to be integral with the shaft 38, as if the groove and the end of the pulley were formed into the end of the shaft.

5. The full diameter portion of Lawroski's drive shaft 38 is capable of receiving a belt.

### PRINCIPLES OF LAW

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969); *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). It is the Appellant's burden to precisely define the invention, not that of the United States Patent and Trademark Office. *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997) (citing 35 U.S.C. § 112, ¶ 2). Appellant has the opportunity to amend the claims during prosecution, and broad interpretation by the Examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *Prater*, 415 F.2d at 1404-05.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987) (citations omitted).

### ANALYSIS

Appellant offers arguments pertaining to all three independent claims 1, 8, and 14, and offers additional arguments for independent claim 8.

App. Br. 5-6; Reply Br. 1-3. As for the dependent claims, Appellant does not present separate arguments for patentability but merely asserts that they are allowable for the same reasons as the independent claims. App. Br. 6. For the arguments pertaining to all of the independent claims, we select claim 1 as the representative claim. We consider separately the additional arguments pertaining to independent claim 8.

*Appellant's Arguments Pertaining to All of the Independent Claims*

Appellant argues that Lawroski discloses a pulley with a belt groove, rather than a power shaft including a belt retaining geometry. App. Br. 5. This argument is not persuasive. As the language of claim 1 indicates, a shaft with a belt retaining geometry is a shaft having a reduced diameter portion. While Lawroski does refer to the location of the belt as a “pulley,” the pulley and its belt groove appear, in Figure 1A, to be integral with the shaft 38. Facts 3, 4. Thus, notwithstanding the reference to a “pulley,” one of ordinary skill would understand Lawroski to disclose a power shaft including a belt retaining geometry.

Appellant also argues that Lawroski lacks a normal belt position adjacent to a reduced diameter portion because Lawroski's reduced diameter portion is the normal belt position. App. Br. 5-6; Reply Br. 2. This argument is not persuasive. Claim 1 does not positively claim a belt, but recites a shaft having a “normal belt position portion 110 adapted for receiving a belt 210.” Claim 1; *see also* Reply Br. 2 (Appellant admitting that “[i]ndependent apparatus claim 1 indeed does not claim the belt[.]”). Appellant's phrase “normal belt position portion” is merely the designation given to a portion of the shaft (the full diameter section) and indicates the

function of that shaft portion, but does not structurally distinguish the claimed shaft from Lawroski's. Both the claimed and the prior art shafts have a full diameter portion with an adjacent reduced diameter portion. *Compare Spec.*, Fig. 5 (depicting an embodiment of Appellant's power shaft) *with* Lawroski, Fig. 1A; *see* Facts 1, 3, 4. Lawroski's full diameter portion, next to the groove, is capable of receiving a belt, Fact 5, and thus is capable of performing the function of the "normal belt position portion." Therefore, Lawroski's full diameter portion is a "normal belt position portion" within the meaning of Appellant's claimed invention.

*Appellant's Additional Arguments Pertaining to Independent Claim 8*

Claim 8 recites that the reduced diameter portion has a first angled portion, a second angled portion, and a neck region that transitions from the first to the second angled portions. The Examiner found that Lawroski's Figure 1A shows a groove with two angled portions joined by a middle portion and that the groove satisfies the limitations. Ans. 3-4. Appellant argues that Lawroski shows only a groove with a smooth, continuous, and circular shape, and that such a shape has no angled portions and "no divisible or distinguishable 'portions.'" Reply Br. 1-2. Appellant suggests that an angled portion must be a generally planar surface, which is absent in Lawroski's curved groove. *Id.* at 2.

We give pending claims their broadest reasonable construction consistent with the specification. *Prater*, 415 F.2d at 1404-05. Appellant's Specification discloses that the neck region can have a neck radius that transitions substantially smoothly between the first and second angled portions. Fact 2. The Specification also discloses an embodiment in which



“the second angled portion 108 comprises a curved portion having a substantially constant or varying curvature radius.” Fact 1. Thus, we disagree with Appellant to the extent that Appellant suggests that claim 8 requires a divisible or distinguishable neck region. We also disagree with the suggestion that the claim’s recitation of an angled portion excludes a curved surface. Appellant has not persuaded us that the Examiner erred in finding that Lawroski discloses the shaft configuration of claim 8 when the claim is given the broadest reasonable construction consistent with the Specification.

Appellant notes that independent claim 8, unlike claim 1, requires a belt positioned on the normal belt position portion of the shaft. App. Br. 5, Reply Br. 2. Lawroski discloses that the belt is received in the groove. Fact 4. The Examiner does not direct our attention to any disclosure in Lawroski of a belt positioned on the full diameter portion of the shaft (the portion corresponding to Appellant’s normal belt position portion). *See* Ans. 3-4. As such, we are constrained to reverse the rejection of claim 8, and of its dependent claims 9, 12, and 13.

## CONCLUSIONS

Appellant has not shown that the Examiner erred in finding the rejected claims anticipated because Lawroski fails to disclose the recited power shaft. Appellant also has not shown that the Examiner erred in rejecting claim 8 because Lawroski does not disclose the recited angled portions with a neck region.

However, Appellant has shown that the Examiner erred in rejecting claim 8 because Lawroski does not disclose a belt on the claimed normal belt position portion.

#### DECISION

The decision of the Examiner to reject claims 8, 9, 12, and 13 is reversed. The decision of the Examiner to reject claims 1-3, 6, 7, 14-16, 19, and 20 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

#### AFFIRMED-IN-PART

Klh

WINSTON & STRAWN LLP  
PATENT DEPARTMENT  
1700 K STREET, N.W.  
WASHINGTON, DC 20006